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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,859	09/05/2003	John A. Barton	2003-IP-010400 UI USA	7274
7590	02/17/2005		EXAMINER CHAMBERS, TROY	
Albert C. Metrailer Conley Rose 5700 Granite Parkway, Suite 330 Plano, TX 75024-6616			ART UNIT 3641	PAPER NUMBER

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/655,859		BARTON ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Troy Chambers		3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 19-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 19-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/13/05.
2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the connection between the retainer, boot and booster charge holder as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitations "upper sealing surface" in lines 2-3. However, it is not clear which upper sealing surface (the firing head or booster charge holder) the applicant is referring to.
3. Claim 3-7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claim 3 requires a outer and inner surface "sized to form a fluid tight seal". It is unclear to the Examiner just how the size of a device relates to its ability to seal. This is not an exhaustive example list. Other claims contain similar language relating size to a functional sealing capability.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4998477 issued to Barker et al. ("Barker").

6. With respect to claim 1, Barker discloses a firing head 14 having a chamber housing a detonator 15 and having an upper sealing surface (via O-rings 13) and a lower sealing surface (at the end opposite O-ring 13). Barker also discloses a booster charge holder 16 (in Fig. 4) having an upper sealing surface (at 12) and a lower sealing surface (at opposite end of the shoulder 12). The booster charge includes a bulkhead 45 and a booster charge chamber containing booster charge 14.

7. With respect to claim 2, Barker discloses a detonator chamber including a detonator 15, 34. O-rings 13 establish the upper sealing surface.

8. With respect to claims 3 and 4, Barker discloses a seal boot 18 having first and second ends, and, inner and outer surfaces. Either end or surface work in conjunction to seal the inner area of the detonator system.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-x are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker as discussed above and in further view of well established case law regarding

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obviousness. Specifically, Barker discloses a detonator system as discussed above with a retainer located within a boot, both operating together to seal the interior of the detonator chamber. The boot is sealingly attached to the firing head. Applicant claims are directed to a configuration in which the retainer takes the place of Barker's boot and applicant's boot takes the place of Barker's retainer. But, the arrangement achieves the same result in the same way; the boot interacts with the retainer to seal the inside.

However, one of ordinary skill in the art would have found it obvious to reverse the order of the parts as claimed by the applicant since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. In re Einstein, 8 USPQ 167.

11. With respect to claims 5-7, refer to the "reversal of parts" part of the rejection.

12. With respect to claim 8, Barker discloses a firing head having a detonator 15, 34. Applicant's use of the term "comprising" the preamble means that a portion as well as a whole of a detonator may be included within the chamber.

13. With respect to claim 9, Barker discloses a booster charge holder 16 including a portion of a detonator 37 adjacent a bulkhead 45.

14. With respect to claim 10, Barker discloses an electrically fired detonator 15, 34 within the firing head 14 chamber. Also included is a wire line sub 11 electrically coupled to the detonator and sealed to the firing head via O-rings 13.

15. With respect to claim 11, the booster charge holder is in sealing arrangement with the detonator chamber lower surface at shoulder 12.

16. With respect to claim 12, Barker discloses a booster charge 37 carried in the booster charge chamber.

17. With respect to claim 13, Barker discloses detonating cord 19 having one end coupled to booster charge 37 (Fig. 4).

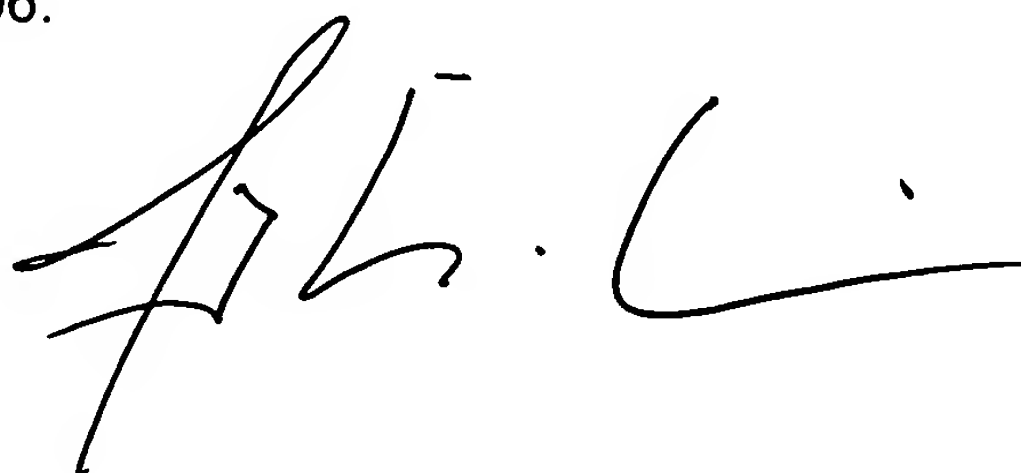
18. With respect to claim 14-18, refer to the "reversal of parts" part of the rejection.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited on form PTO-892 are cited as of interest to show similar

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (703) 308-5870. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (703) 306-4198.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4177. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

A handwritten signature in black ink, appearing to be 'A.L.C.', is written below the text.